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ABSTRACT

The rate of growth in higher education enrollment has slowed in the 1970's, largely because the percentage of the population aged 18 to 22 is receding from the unprecedented high levels of the 1960's. Other reasons revolve around the changing social and economic aspirations of students and how they are served or not served by the program offerings of the higher educational system. Current conditions are described in terms of age composition, population mix, patterns of participation, and changing student interests. Future developments in enrollment patterns must consider economic conditions, a broader role for higher education, differential impact, and changes in the student population. It is concluded that (1) there is general agreement that colleges and universities can no longer rely upon college attendance among 18-22-year-olds to achieve long-range growth, and (2) there is sufficient diversity in higher education to adjust to the needs of a society committed to providing all of its citizens with an opportunity to do their best. (LBH)

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Enrollment Trends in Higher Education

Carol Herrnstadt Shulman

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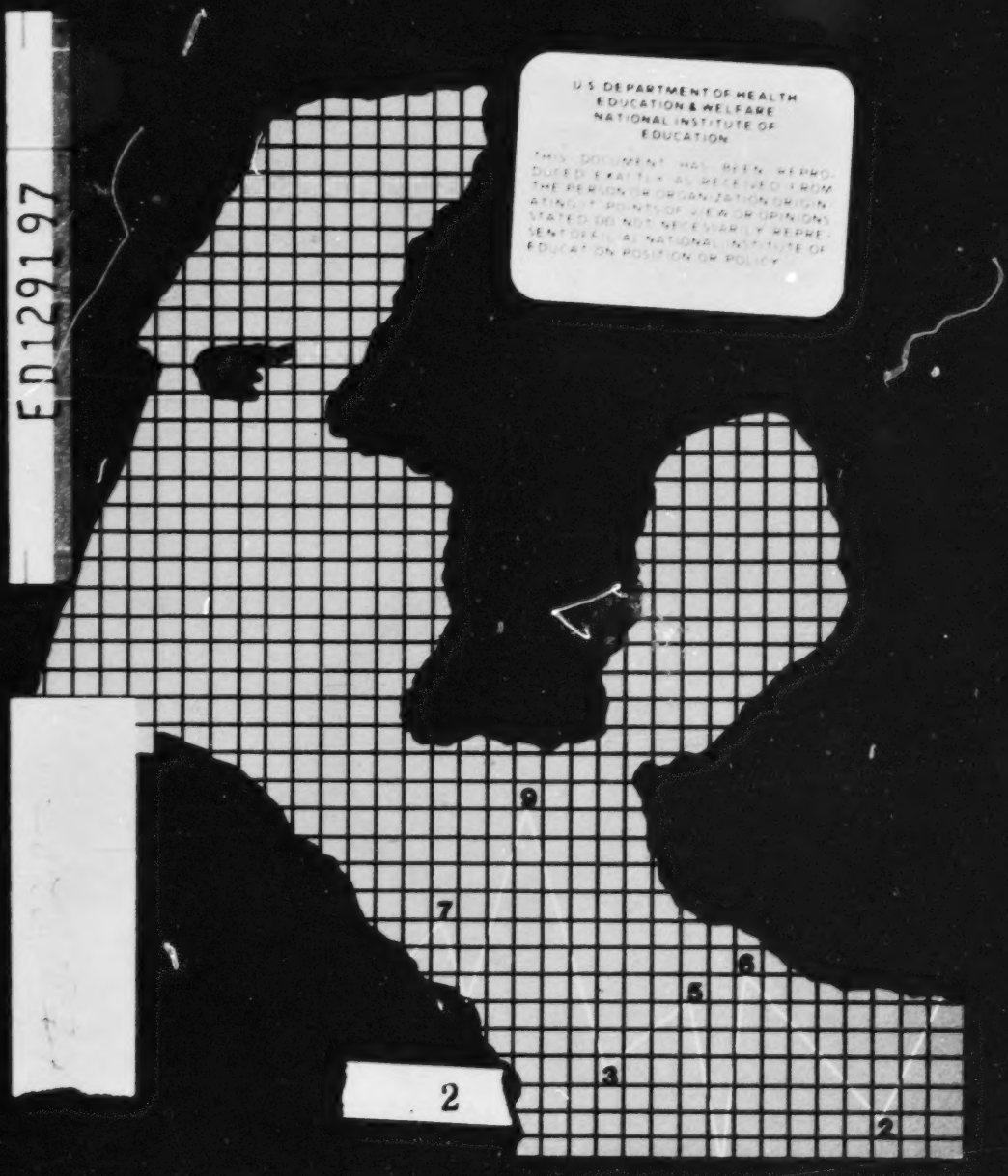

Enrollment Trends in Higher Education

Carol Herrnstadt Shulman

ERIC/Higher Education
Research Report No. 6
1976

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Foreword

The astounding pace of growth in higher education enrollment in the 1960's has slowed in the 1970's. Several reasons can be and are advanced for this predictable development, but the most cogent is that the percentage of the population of traditional college-going age, 18 to 22, is receding from the unprecedented high levels of the 1960's. Other reasons revolve around the changing social and economic aspirations of students and how they are served or not served by the program offerings of the higher educational system. Projections of future higher education enrollments, both near-range and long-range, are as unreliable as other predictions of future population trends. But one conclusion seems inescapable: the potential for expansion in postsecondary education resides with a much more diverse population mix than the traditional 18-to-22, college-going age group. It is also quite clear that equal educational opportunity is an unfinished commitment and that the continued pursuit of that goal alone holds tremendous promise for higher education's continued growth in service to individuals and the nation. The author points out that the predictions of the forecasting experts run the gamut from "dismal to highly optimistic," depending upon their perceptions of the goals of higher education. But she also concludes (1) that there is general agreement that colleges and universities can no longer rely upon college attendance among 18-to-22-year-olds to achieve long-range growth and (2) that there is sufficient diversity in higher education to adjust to the needs of a society committed to providing all of its citizens with an opportunity to do their best. The author, Carol Herrnstadt Shulman, a research associate at the Clearinghouse, has authored *Premises and Programs for a Learning Society*, which deals with the increasing participation of adult and part-time students in postsecondary education. She has also written a considerable number of other studies for the research report series.

Peter P. Muirhead, Director
ERIC/Higher Education

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Overview

Historically, higher education has experienced and anticipated long periods of growth and development. It has measured its expansion in terms of the percentage of the population participating in higher education, particularly the 18-to-22 age group. By the 1970's higher education planners knew that colleges and universities could no longer depend on their traditional method of growth, since reports indicated that the 18-to-22 age group represented a shrinking percentage of the total population.

Contemporary conditions also suggest that colleges and universities cannot expect their growth to follow historical patterns. Many institutions have already experienced enrollment decline, with some types of colleges more severely affected than others. This situation has been attributed to new political, social, and economic developments that decrease the perceived value of college attendance for many potential enrollees from the 18-to-22 age group. In the past, traditional college students and liberal arts institutions have developed a meshing of student expectations and college services. Now, however, students' socioeconomic characteristics, abilities, interests, and patterns of participation are shifting in ways that may not coincide with the character of traditional colleges and universities. For example, over the past 12 years the percentage of students of high ability and high socioeconomic status going to college has decreased while the percentage of women of high ability–low socioeconomic status and men of low ability–high socioeconomic status attending college has increased. Finally, part-time enrollments of students of all ages, particularly adult enrollments, are on the increase. This growth requires adjustments on the part of institutions accustomed to a traditional college population. Given these considerations, higher education administrators have recognized that greater flexibility in their institutional policies and programs will be required to adapt to new conditions.

To plan for the future, these administrators have available the aid of several forecasts of enrollment participation to the year 2000. These projections vary greatly in their estimates about the level of enrollment and the growth of higher education. The variations in estimates occur because the analysts build into their forecasts their differing visions of how higher education can or should develop, and

because their visions are linked to their assumptions about the future of the American economy and its relationship to higher education.

These projections are useful for planning, but current institutional responses to enrollment problems will also influence the future development of higher education. Survey results show that many undergraduate colleges have modified or plan to modify their admissions standards to boost enrollments; an increasing number of graduate schools also anticipate admissions changes between 1974 and 1980. Recruitment efforts have been strengthened on many campuses to create the largest possible applicant pool. Institutions have also responded to enrollment problems by adapting programs to meet new student interests and needs, particularly in the area of vocational preparation. Such efforts might include adding a vocational component to existing areas of study, introducing, totally new course offerings, and developing new instructional approaches for students who are not well served by traditional learning methods.

The problems presented by enrollment fluctuations have been most prominent in statewide systems, in which budget planning is frequently linked to current and projected enrollment figures. Here, the enrollment formulas that worked well during a period of rapidly increasing enrollments may be harmful to use under certain circumstances; for example, when funds are taken away from an institution that is now suffering enrollment declines. The amount taken away may be greater than the savings that result from the enrollment of fewer students. The statewide systems are therefore in the process of reevaluating their present budget formulas to alleviate this problem. Statewide systems have also begun to consider or to establish enrollment limitations to avoid unnecessary and costly expansion. This move is prompted by the belief that a current bulge in enrollments will be followed by long-term stabilization or decline, and that current expansion would therefore be unwarranted.

In view of the uncertainties inherent in enrollment projections, higher education officials might be well-advised to monitor closely the major demographic, economic, and public policy considerations that influence enrollment, and to make use of available modeling and analytical studies, but at the same time recognize that the outcome is not certain. Finally, they need to maintain institutional options, taking decisive actions when the institution's monitoring processes indicate they are appropriate. The true merit of current enrollment analyses and projections may lie in serving as useful paradigms for higher education planners when they analyze the confusing and sometimes contradictory developments in enrollment trends.

Introduction

Students are the foundation of the higher education enterprise. By their numbers, educational interests, and institutional choices, they ultimately influence the finances, missions, and organization of higher education institutions. Therefore, enrollment patterns, implied or stated, are at the heart of many discussions on college and university issues. Since the mid-1970's, enrollment patterns have become a widely debated issue because colleges and universities have experienced enrollment fluctuations, and recent projections indicate this trend will continue.

College administrators became concerned over enrollment trends in 1972 when population reports indicated the rate of graduation from high school was stabilizing; later reports also showed that the birthrate was declining, and might reach zero population growth by the year 2000 (Carnegie Foundation 1975; Leslie and Miller 1974). These early warnings indicated that the potential pool for traditional college-age students would be significantly reduced over the next 30 years. By 1973, a number of institutions experienced stabilization or losses in enrollments, created in part by changing enrollment patterns, and the problem became intensified. Eventually, these trends will affect all higher education institutions.

To these statistics, higher education analysts add the complications of potentially important changes in the composition of the college student population. In contrast to the student of the recent past, they note that today's students reflect a wider range of demographic characteristics and academic abilities, and show a greater interest in majors that provide career preparation. This new student population may seek out nontraditional or vocational curricula and new educational structures, causing them to bypass traditional institutions. Students may also weigh the cost of college attendance, especially a liberal arts education, against the difficulties of finding high-paying work after college graduation, and find the cost of college attendance too high. These considerations may contribute further to enrollment declines at traditional institutions.

Higher education has faced changes in the rate of student participation and in students' academic interests before, but educators today are concerned that the decline in the rate of participation will occur so rapidly that institutions will lack the necessary flexibility to adjust

their programs to students' new needs and goals. They also realize that some types of institutions will be more seriously affected than others (Carnegie Foundation 1975). Also, there is considerable uncertainty and uneasiness over the future character of higher education.

This research report will examine how enrollment patterns are changing in higher education and what the implications of these changes are for higher education institutions. It will focus on the current situation and projections for enrollment patterns to the year 2000. As used in this report, enrollment patterns refer to two separate issues: the number of students enrolled in higher education and the type of institutions they attend; and the personal characteristics of these students, e.g., their socioeconomic background, academic abilities, interests, and goals.

It should be noted that this report will not consider the present and future role of public policy in augmenting enrollments in higher education. Public policy can, of course, contribute to enrollment increases. The influence of the G.I. Bill on enrollment by World War II veterans is a prime example of a cause-and-effect relationship between government and higher education. But the effect on enrollment of more recent government support, in the form of the Basic Educational Opportunity Grant and the Guaranteed Student Loan Program, is uncertain. Research on this subject is limited, and a full discussion of this issue will have to await more information.

Historical Perspective and Current Conditions

A review of higher education's history reveals that colleges and universities have only infrequently known periods when growth and development were not customary. Growth periods are characterized by enrollment increases, which are the best measure of expansion (Leslie and Miller 1974). It is not surprising that college administrators should be concerned about the future development of higher education when many current forecasts predict long-term enrollment declines. This chapter provides a statistical discussion of the causes of past and present enrollment growth. Interpretation of statistical information relating to this growth will be examined in chapter two.

Since the latter part of the nineteenth century, college administrators have experienced some periods of decline in enrollments when there were changes in the socioeconomic or political spheres; for example, 1917 to 1918, 1933 to 1934, 1943 to 1944, and 1949 to 1951. (Carnegie Foundation 1975). Leslie and Miller (1974) charted this pattern from 1890, finding periodic depressions in growth but an overall upward curve. They suggest this occurs because:

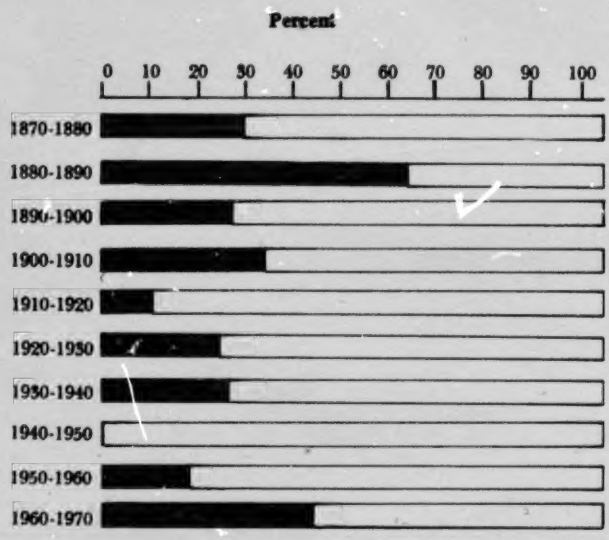
> higher education institutions as a whole are in a constant state of dynamism, seeking somehow to sustain long-term growth or transverse progression. Although the system both peaks and reaches low points periodically, and assumes the characteristics of a steady state, the overall pattern appears to be one of dynamism and steady growth (Leslie and Miller 1974, pp. 14-15).

Leslie and Miller maintain that growth and development in higher education have occurred because colleges and universities initiated changes that contribute to the expansion of their roles. In contrast, the Carnegie Foundation (1975), which also recognizes the overall growth pattern that higher education has experienced, attributes a considerable amount of higher education's growth to developments outside the control of colleges and universities that compelled an institutional response. The Foundation points to three major factors that encouraged the expansion of higher education: (1) a national commitment to increase access to higher education, starting in the nineteenth century, which has now become a significant goal in our public policy for higher education; (2) the belief that American society needs to build a capacity for advanced research and study as a basis for meeting current and future societal needs; and (3) in-

creased institutional services to other sectors of society, such as agriculture, the community, and the professions (Carnegie Foundation 1975, pp. 25-26).

The first two factors fostered growth because they significantly increased the percentage of the population going to college. Except for the decade 1880 to 1890, more than half of the increase in college enrollments between 1870 and 1970 was due to increased participation rather than to a larger population. The Foundation observes that between 1870 and 1970 "the percent of growth in student enrollments outstripped the percent of population growth by 34 times" (Carnegie Foundation 1975, p. 24). The figure below exhibits the relationship between population growth and increased enrollment.

Figure 1. Percent of degree-credit undergraduate enrollment growth attributable to population growth and enrollment ratios



Source: Carnegie Commission on Higher Education (1971b, p. 127). (Carnegie Foundation, *More Than Survival*, 1975, p. 29 source)

Figure 1 shows that during the 1960's, population growth and increased participation were of nearly equal importance in expanding higher education. Statistics from other sources support this finding. In population growth, this nation saw a 53.9 percent increase in the number of citizens aged 18 to 21 between 1960 and 1970 (Bureau of Census 1975, p. 4). The increase in population and greater rate of participation from this 18-to-21-year-old group led to dramatically higher enrollments: with 1955 as a base year, degree credit enrollment increased 35 percent in 1960, 108 percent in 1965, and 196 percent in 1970—a total increase of more than 5 million students (Henry 1975, p. 101). This period of unusual expansion due to the meshing of the population and participation factors is over. Virtually all analyses suggest that expansion based on an increasing 18-to-22-year-old population is unlikely. If further expansion is to occur, it would have to come from greater participation rates among other segments of the population.

Considered next are conditions that now influence enrollment patterns: (1) the composition of the national population; (2) recent enrollment declines; (3) changes in the mix of the 18-to-24-year-old student population; (4) new patterns of participation in higher education; and (5) students' changing academic interests.

Age Composition

Recent figures indicate that the age composition of the national population is changing, and that there is a definite shift upward in the age of the majority of the population. Consequently, college officials can no longer expect to have as large a pool of 18-to-22-year-old students to select from as in the past. Current figures and projections show a decline in elementary and secondary school enrollments. While school enrollments were 2.1 million students higher in 1974 than in 1964 (49.8 million to 47.7 million), this represented a decline of 1.5 million students enrolled between 1970 and 1974. It is anticipated that this decline will continue, so that by 1984 enrollment levels will have decreased by 2.9 million students since 1964, based on a projection of 44.8 million students enrolled in 1984. At the same time, statistical projections indicate that by the year 2000, persons between the ages of 30 and 50 will comprise a majority of the population (Golladay 1976).*

* A dissent from this view underscores the uncertainties of making long-range predictions about human social choices. Sklar and Berkov suggest that the birth-rate will increase again because the current decline is due "in large part by the postponement of marriage and childbearing among cohorts of young women" rather than a decision against childbearing (Sklar and Berkov 1975, p. 699).

Enrollment Declines

Many colleges have already experienced decline in enrollment or a decrease in their rate of growth. This development first became apparent in 1970 when most institutions found a decline in their rate of enrollment growth, and some institutions found an actual decrease in their enrollments, especially among traditional college-age students. Nationally, from 1970 to 1974, there was only an increase of 300,000 18-to-19-year-old students enrolled full time in all institutions of higher education (Policy Analysis Service 1975).* The Carnegie Foundation (1975) suggests four major causes for this decline: (1) the end of the draft; (2) accelerating costs of college attendance; (3) changing job-market conditions that limit opportunities for college graduates, as well as less difference in earnings of high school and college graduates; and (4) a relaxing of college regulations to permit students to "stop out" during their college years (p. 31).

These declines have been felt by certain types of institutions. This differential impact is demonstrated in a survey of college presidents that focussed on an assessment of their institutional conditions. Responses were gathered from representatives of 1,227 institutions, which enroll about two-thirds of all students in higher education. Table 1 indicates the impact of enrollment fluctuations on private and public institutions.

It is apparent that institutions in the private sector have experienced a greater decline or stabilization than public institutions. However, the table also shows that, overall, private institutional enrollment has remained relatively stable. This view is supported by the findings of Bowen and Minter (1975; 1976) in their study of the condition of private higher education based on a 100-institution sample. Bowen and Minter report a net increase of 8 percent in enrollment from 1969 to 1974. However, less selective liberal arts colleges did not participate in this increase and actually suffered declines in enrollment. Further, growth was not evenly distributed among all divisions of the institutions. Substantial enrollment gains occurred in graduate and professional schools; enrollments held steady for juniors and seniors, while freshman and sophomore enrollment declined. Declines in freshman enrollment, about 10 percent between 1969 and 1975, have been offset by increases of about 34 percent in the admission of undergraduate transfer students, resulting in a net loss of about 2 percent during the six-year period.

* The Bureau of the Census (1976b) reports, however, that in fall 1975 a large increase in the higher education population occurred among younger students enrolled in the first two years of college.

*Table 1. Change in FTE enrollment, actual 1968-1974, by Carnegie type and control (in percentages of responding institutions)**

Carnegie type and control	(N)	Increased more than 10 percent	Little change	Decreased more than 10 percent
All institutions	(1,169)	61	22	17
Public				
Research universities	(36)	75	25	†
Other doctoral	(32)	69	28	3
Comprehensives	(167)	70	16	14
Liberal arts	(19)	79	16	5
Two-year	(327)	84	11	5
Professional	(19)	74	16	10
Total public	(600)	78	14	8
Private				
Research universities	(20)	45	40	15
Other doctoral	(19)	47	26	26
Comprehensives	(80)	41	30	29
Liberal arts	(301)	42	30	28
Two-year	(70)	39	30	31
Profesional	(79)	57	28	15
Total private	(569)	44	30	26

† No observations.
* Glenny et al. 1976, p. 10, Table 3.

In the public sector, the comprehensive institutions suffered the greatest declines, which were particularly noticeable on a regional basis. The Glenny survey also reports differences in enrollment trends among institutional types, without regard to private or public status. For example, it found decreases were more likely to occur among:

> (1) comprehensive and liberal arts colleges and professional schools that do not offer more than a baccalaureate degree; (2) the relatively small number of liberal arts colleges for women and the larger number that offer teacher preparatory or occupational programs; (3) comprehensive and liberal arts colleges with no professional program as defined in HEGIS; and (4) institutions that pursue an essentially open-admissions policy (Glenny 1976, p. 11).

In addition, size and location are evidently factors that influence student enrollment decisions. Except for research and doctoral-grant-

ing institutions, colleges with small enrollments are more likely to have suffered enrollment declines since 1968 than larger institutions. Particularly hard hit are liberal arts institutions with enrollments under 1,000 students. Almost three-fourths of such institutions reported losses, while only one-third of liberal arts institutions reporting increases were this small (Glenny et al. 1976, p. 11).

Institutions in rural areas and small towns experienced greater declines or enrollment levelings between 1968 and 1974 than institutions in other areas, and regional variations were also found; greater enrollment problems occurred in the West North Central, East North Central, and West South Central states. These areas have substantially larger numbers of private liberal arts institutions (East and West North Central areas), or a larger number of public comprehensive universities (Glenny et al. 1976, p. 11-12).*

Information available about the public sector also indicates changing patterns of enrollment by geographic location and pattern of attendance. In a study of 247 state colleges and universities, Stampen (1976) found that between 1969 and 1974 public institutions experienced a 13.2 percent increase in enrollment; however, this growth hides the fact that rural institutions suffered losses that were offset by large increases in urban institutions (defined as schools located within 30 miles of city/county areas with populations over 100,000). Stampen argues that cost considerations were the prime factor in causing this shift and notes that enrollment of older students increased sharply, while enrollments of dependent students declined. He suggests that for the older student, cost was an important consideration, which made the close-to-home, urban institution a more satisfactory choice. Consequently, the high cost of college attendance for middle-income students became a barrier to full-time college attendance, for which they compensated by enrolling part-time and living at home, generally in an urban setting. Cost problems for students may be further complicated by the problem of "sibling overlap," a situation in which parents have to support more than one offspring in college at the same time; since this is a difficult burden for them, they choose instead to support only part-time higher education, or education closer to home, rather than more expensive, rural, residential education.

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* West North Central includes Iowa, Kansas, Minnesota, Missouri, Nebraska, and North and South Dakota; East North Central includes Illinois, Indiana, Michigan, Ohio, and Wisconsin; and West South Central refers to Arkansas, Texas, Louisiana, and Oklahoma.

Population Mix

Students currently enrolled in four-year institutions have created new differences in the population mix. An analysis produced by the National Center for Education Statistics (Golladay 1976) observes several important changes in this mix. Increasing numbers of male high school seniors are not planning to attend college. The percentage of males planning to attend has declined from 46.1 percent in 1972 to 40.9 percent in 1974; the percentage of female students has held constant at about 46 percent.

The mix of students by socioeconomic status and ability levels has also changed. In 1960, approximately 90 percent of high-ability, high-socioeconomic-status males went on to four-year colleges; by 1972, this figure had dropped to 70 percent. For men of high-ability but low socioeconomic status, the percentage entering four-year institutions had decreased by about 10 percent; for women, these changes were not as dramatic. High ability, high-socioeconomic-status female enrollment only decreased by about 5 percent between 1960 and 1972, whereas high-ability, low-socioeconomic-status women's entrance into college actually increased by about 10 percent between 1960 and 1972 (Golladay 1976, p. 79). Among students of low ability, only men with high socioeconomic status have increased their rate of college attendance—about 10 percent from 1969 to 1972 (Golladay 1976, p. 79).

Patterns of Participation

New patterns of participation by traditional college-age students and older students have also been emerging. Among both groups, part-time enrollment has become an increasingly attractive option. For example, the Committee on the Financing of Higher Education for Adult Students (1974) reported that 57.5 percent of the total student body in 1972 was part-time students, which represented a 2.5 percent increase over 1969 (pp. 39-40), and included an 18.9 percent increase in the four-year college and university sector (p. 82). A more recent report (Stampen 1976) found that state colleges and universities experienced large increases in part-time enrollments from 1969 to 1974. By region, these increases were 12 percent (East), 25 percent (West), 45 percent (Midwest), and 49 percent (South).

Changing Student Interests

The current enrollment situation is also changing because students are shifting away from traditional liberal arts subjects to areas that may offer more direct career preparation. For the period from 1968

through 1974, Glenny found that more than half of the institutions that offer courses in the following fields report increased enrollments: "other vocational/technical (two-year), 81 percent; health sciences, 80 percent; business, 73 percent; biological sciences, 58 percent; social sciences, 56 percent; fine arts, 52 percent; and agriculture, 50 percent" (Glenny et al. 1976, p. 21). Decreases were found in one-fourth to one-half of the institutions that offer courses in: "foreign languages, 63 percent; engineering, 36 percent; education, 36 percent; humanities, 26 percent; and physical sciences, 25 percent (Glenny et al. 1976, p. 21).

Summary and Analysis

Higher education's enrollment history in this country indicates that colleges and universities can adapt their institutions to changing student needs. In so doing, they may experience new growth. However, contemporary enrollment patterns give reason to doubt the certainty of this projection. In the past, higher education experienced enrollment gains because increasing numbers of youth from the normal college age group of the population did go to college. Current statistics indicate this group represents a declining percentage of the total population. In addition, colleges are already experiencing enrollment declines, with some institutions more severely hit than others. The situation is further complicated because the socioeconomic characteristics, abilities, patterns of participation and interests of the 18-to-22-year-old students are shifting in ways that may not coincide with the present character of traditional colleges and universities.

Given these considerations, higher education administrators recognize that they will need greater flexibility in their institutional policies and programs to adapt to new conditions. They need to attract new kinds of students to their campuses if they are to continue to have a sufficient enrollment base for institutional survival and development. To plan for the future, these administrators have available the aid of several forecasts of enrollment participation to the year 2000. These forecasts, which are frequently conflicting, may confound as well as assist administrators.

Future Developments in Enrollment Patterns

On the whole, recent enrollment projections for higher education suggest that higher education will experience declines or minimal growth. However, there is such variation in these forecasts, that this writer will not attempt to derive from them a complete assessment of what future enrollment patterns will be. Rather, this chapter will describe some of the variables that go into the formulation of an enrollment projection. The author believes that the greatest value of these projections for educational planners lies more in the insight they provide into the analytical process by which some final projection is determined than in the final projection itself.

Two Introductory Projections

Analysts are not in harmony in their projections of the numbers of students colleges and universities can anticipate. The projections range from quite pessimistic (Dresch 1975) to very favorable (Bowen 1974) outlooks about the level of enrollment and the growth of higher education. The projections vary greatly because the analysts build into their forecasts differing visions of how higher education can or should develop, and because their visions are linked to special assumptions about the future of the American economy and its relationship to higher education.

Simon and Frankel's (1976) projections of enrollment to 1984 for the National Center for Education Statistics are perhaps the simplest and most basic set of figures available. They make only one major assumption:

> Degree-credit enrollment projections are based primarily on the assumption that full-time undergraduates and unclassified enrollment as a percentage of the 18-21 year-old population will remain constant at the 1974 level through 1984 and that the percentage of part-time enrollment will increase, following the 1968 to 1974 trend through 1984 (Simon and Frankel 1976, p. 14).

From this premise, they arrive at a forecast of a 9 percent increase in degree-credit enrollment for higher education between 1974 and 1984, divided between an increase of 14 percent for public institutions and a loss of 7 percent for private institutions (Simon and Frankel 1976, p. 8). Total degree credit enrollment is projected to rise from 9,023,000 in 1974 to 9,811,000 in 1984.

However, these figures change if viewed in terms of full-time equivalent enrollment. Here, Simon and Frankel assume that "the 1974 full-time equivalent of part-time enrollment (37.3 percent for degree credit students and 36.8 percent for non degree-credit students) will remain constant through 1984" (Simon and Frankel 19776, p. 14). They do not project any increase in full-time enrollment between 1974 and 1984; they do foresee a part-time increase of 24 percent and a full-time equivalent increase of 4 percent. Fu[11]-time equivalence would change from 7,015,000 in 1974 to 7,325,000 in 1984. Public and private shares for these figures are not provided (Simon and Frankel 1976, p. 8).

From the spate of enrollment projections available, it is apparent that Simon and Frankel's simple projection method, based on a constant growth rate, is only a starting point for many analysts. The Carnegie Foundation's projections (1975) are an excellent example of the multitude of factors, as well as uncertainties, that may enter into enrollment forecasts.

First, in contrast to the constant-rate approach, which does not recognize changing circumstances, the Carnegie Foundation's baseline projections:

> assume rising enrollment rates based on past trends rather than constant enrollment rates, for:
> Part-time students
> Non-degree-credit students
> Students 22 years of age and older
> Graduate and first professional degree students
> Women students
> Black and other minority students (Carnegie Foundation 1975, p. 45).

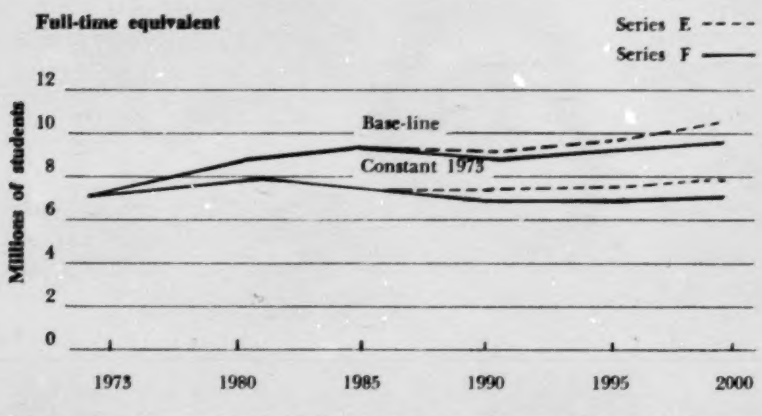
Second, the Foundation includes the following premises in its projections: (1) ". . . white male enrollment rates will return to their peak levels of the late 1960s by the year 2000;" (2) Census Bureau population projections based on lower fertility rates will be reasonably reliable; (3) schoolteacher employment will reflect current pupil-teacher ratios; (4) there will be no reinstatement of the draft; and (5) there will be more increases in student aid (Carnegie Foundation 1975, pp. 44-46).

Third, the Foundation lists 10 areas of political, social, and economic activity in which uncertainty about future directions exists; particular types of changes in these areas could affect the validity of the Foundation's projections. This list of uncertainties is significant for the understanding it provides of the complexities of enrollment

projections and of the areas that need to be monitored regularly by educational planners involved in enrollment analysis.

In the political area the Foundation sees public policy changes as the most important influence on enrollment projections. It observes that changes in federal and state policy, in tandem, could affect enrollment projections by 10 percent, positively or negatively, yielding a 20 percent " 'zone of uncertainty' " in their projections (Carnegie Foundation 1975, p. 48). However, the Foundation does not anticipate such changes will occur. Under social considerations, the Foundation includes such changes in behavior as increases in the birthrate or new lifestyles of young people that would affect enrollment decisions. Economic conditions are an especially important influence on enrollment projections. Thus, the Foundation projections would be valid for "an economy where the consumer price index will increase at an annual rate of about 4 to 6 percent and the real national product will grow at an annual rate of 3.5 percent" (1975, p. 47).

Figure 2. Total enrollment in higher education, actual 1973 and projected 1980-2000, Carnegie Council base-line compared with projections assuming constant 1973 enrollment rates, total and full-time equivalent



Note: Series E uses population estimates from census Series E data, which assume a fertility rate of 2.1. Series F uses population estimates from census Series F data, which assume a fertility rate of 1.8.

Source: Carnegie Council.

Despite the difficulties in forecasting that this list of uncertainties suggests, the Carnegie Foundation projections are more optimistic than those arrived at using the constant rate approach; Figure 2 illustrates a difference of 2 to 3 million students by the year 2000 in projections for full-time-equivalent enrollment when compared to the Simon and Frankel projections (Carnegie Foundation 1975, p. 43, Figure 9).

Enrollment Projections and Economic Conditions

Several enrollment analysts emphasize that the promise of a well-paying and satisfying career after graduation is the major incentive for attending college. Among these writers there is a clear tendency to equate college enrollment fluctuations with changing economic circumstances. There are excellent reasons for this equation. O'Toole (1975a) points out that preparation for work has become the "dominant function" of education in many societies (p. 26). College attendance has increasingly been evaluated by the higher education community, business, and government using "the human capitalist mode of calculating the return of investment per year of education" (O'Toole 1975a, p. 29). But this faith in higher education's effectiveness in job preparation is being undermined as the economy becomes saturated with college graduates who cannot find jobs that meet their level of career expectations or utilize their newly developed skills. O'Toole observes "levels of educational attainment have tended to grow in almost geometric progression," a rate not matched by the growth in job opportunities (O'Toole 1975a, p. 28).

Several analysts (Dresch 1975; Froomkin in Carnegie Foundation 1975) agree with this latter observation and contend that this developing situation will foster enrollment decline because a college degree will no longer guarantee job opportunities. In support of this position, Dresch looks at the history of higher education from about 1930 to 1970 as it relates to changes in the country's economy and population growth. His analysis of what occurred in this relationship is useful in understanding the dependence of higher education's growth on outside factors and why some experts foresee enrollment declines.

Dresch attributes the expansion of higher education between 1930 and 1970 to changes in the makeup of the economic sector and shifts in population growth. He finds that the supply of college-educated labor has grown mainly because new industrial sectors have developed and not because existing sectors have new needs for educated labor. He reports that between 1929 and 1969:

> the college-educated proportion of the labor force increased from 5.2 percent to 12.9 percent, a gain of 7.7 percentage points. Of this gain, however, 5.4 percentage points (70 percent) can be accounted for by changes in the sectoral composition of employment, only 2.3 points (30 percent) by general intrasectoral increases in the representation of the college educated (p. 240).

Dresch contends that the greatest significance of these figures lies in the fact that the increased percentages of college-educated workers within a particular industrial area are "entirely concentrated in the post-war period" (Dresch 1975, p. 240). Dresch believes this time element is important because the economic and social conditions that existed at that time encouraged college-attendance, but he contends that these conditions have passed and will not occur again.

Dresch believes that the post-war increases in college-educated labor resulted from the convergence of two major factors: (1) rapid technological changes that were delayed by the depression and the war; and (2) a small college-age population available for training, resulting from low birthrates during the depression, which yielded an average rate of enrollment growth during the 1950's of only 1.9 percent. Therefore, demand for college graduates was high during the 1950's but the supply was low. Assured that they would be successfully employed, high school graduates enrolled in college at increasingly higher rates (Dresch 1975).

Dresch argues that these circumstances have been radically altered for the present and the future. In the 1970's the job market for college-educated workers has become saturated, and the wage differential between college and noncollege educated workers is narrowing, thus providing a disincentive for college attendance and college completion. Based on this analysis of the job market-demographic variables, Dresch foresees that higher education will be faced with a 33 percent contraction in enrollments between 1970 and 2000. Increases in enrollments are projected to end in 1975; institutions will face stable enrollments between 1975 and 1980, a decline of 40 percent between 1980 and 1990, and 12 percent between 1990 and 2000 (Dresch 1975, p. 244).

Broader Role for Higher Education

For some observers of higher education (Bowen 1974; Leslie and Miller 1974), the foregoing projections ignore the possibilities for flexibility that both the economy and colleges and universities may achieve. In addition, these writers also quarrel with the view that college attendance is only economically motivated. Instead, they pre-

sent an expansionist view of higher education's role in society that would result in increasing enrollments by the year 2000.

Bowen (1974) suggests that the economy will learn to utilize the new human resources that become available by developing new technologies, changing job content, and other adjustments. Further, he faults the soundness of using long-range predictions about economic development as a basis for educational planning. He argues:

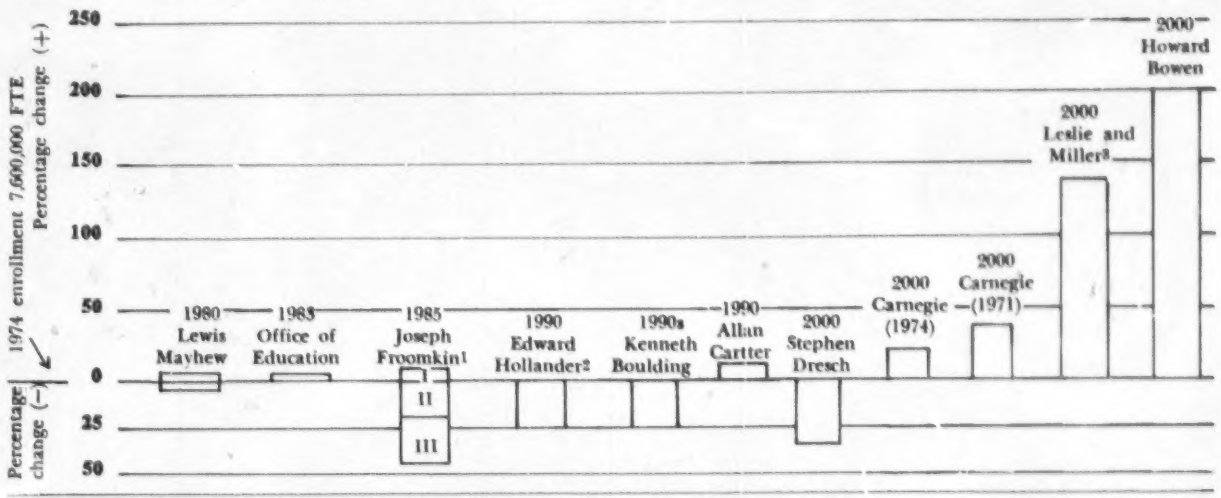
> The manpower requirements cannot be predicted because they depend on what the nation will be doing. The requirements will differ depending on whether the nation is at war or peace. . . . Manpower requirements depend on what the country wants to do, which, paradoxically, is determined in part by the way its people have been educated (Bowen 1974, p. 156).

Despite the uncertainty about future social and economic developments, Bowen does point out some areas of expansion in society that offer growth for the higher education community. Foremost among them is the growth of the service sector of the economy. Bowen notes that this sector has grown from 28 percent of the economy in 1900 to about 60 percent in 1974; at the same time, the industrial sector has declined gradually from about 40 percent in 1950 to 36 percent in 1971 (Bowen 1974, p. 152). He therefore believes that the potential for greater growth in the service sector exists, and trained manpower will be necessary for it (Bowen 1974; Berger 1976). In addition, Bowen foresees that the availability of leisure time for workers will continue to increase, and that many will turn to higher education to use that new time.

On more philosophical grounds, Bowen quarrels with the idea that higher education's purposes are solely vocational, and that other objectives are not appropriate. He suggests that higher education is important to a technological society for reasons other than skill development: "[Education] is intended to produce people of vision and sensitivity who will be motivated as consumers and citizens to direct technology into humanly constructive channels" (Bowen 1974, p. 157).

Similarly, Leslie and Miller (1974) foresee that higher education will continue to be an essential factor in our technological society. In their predictions they make a significant distinction between higher education institutions as they are now structured and the higher education function, which includes the responsibility to preserve and transmit Western culture, to safeguard freedom, and to criticize and question society (Leslie and Miller 1974, p. 20). They suggest that as higher education evolves, the form it takes may change, but its essential function is necessary to social stability and development.

Figure 3. How different projections and possibilities for enrollment in higher education compare with the 1974 level of enrollment (percentage comparisons)



1 Froomkin sets forth three "scenarios."

2 Enrollment level for full-time undergraduates in the state of New York.

3 Leslie and Miller assume that enrollment in higher education is linked directly to the rate of growth of the total gross national product. The Council has estimated the implied growth on the assumption that real GNP rises at an average rate of 3.5 percent a year from 1974 to 2000.

Sources: Appendix B. (Carnegie Foundation. *More Than Survival* 1975, p. 41, figure 8.)

Bowen's and Leslie and Miller's conceptual discussions do not provide specific figures for enrollment growth to the year 2000. Bowen looks to a doubling or tripling of the enrollment growth rate if favorable public policies and educational flexibility are forthcoming (Bowen 1974, p. 157). Leslie and Miller find that higher education grows in relation to the growth in the American economy. As expansion occurs in the economic sector, expansion in higher education is expected to follow. These hypotheses have been translated into approximate figures by the Carnegie Foundation (1975, p. 41). Figure 3 sums up the range of projections that different analysts, reflecting different perspectives, have developed.

Differential Impact

The business of enrollment forecasting does not end with these national projections. Analysts also add their concern about how future enrollment levels will affect different types of institutions. It is generally acknowledge that institutions will be influenced by changes in student goals, interests, and problems associated with college attendance.

Recognizing the importance of enrollment forecasting, the Carnegie Foundation has developed three projections for institutional types using the Carnegie Classification system.* Although the Foundation believes its first two projections are unlikely, a description of the analysis used in these projections is useful in understanding the third projection and in providing insight into the process of enrollment forecasting.

In the first projection, the Foundation looks at the current enrollment percentages of each type of institution and projects enrollment to 1985 on the assumption that this percentage will remain constant. As of 1973, percentage shares of full-time equivalent enrollment among institutions were (1) universities—33.4; (2) comprehensive colleges and universities—33.1; (3) highly selective liberal arts colleges—2.7; (4) less highly selective liberal arts colleges—6.9;

* (1) universities (all doctoral-granting institutions); (2) comprehensive colleges and universities (all institutions that offer a liberal arts program as well as several other programs, including graduate and professional, but no—or extremely limited—doctoral programs); (3) highly selective liberal arts colleges [as defined by Astin's (1971) selectivity index, or ranked as a leading baccalaureate-granting institution by the National Academy of Sciences]; (4) less highly selective liberal arts colleges (all liberal arts colleges that do not meet the criteria of "highly selective"); (5) public two-year colleges (all two-year publicly controlled institutions); and (6) private two-year colleges (privately controlled two-year colleges and institutes). (The Carnegie Foundation 1975, p. 51).

(5) public community colleges—22.5; and (6) private two-year colleges—1.4 (Carnegie Foundation 1975, p. 51). With a full-time equivalency enrollment of 8,971,000 in 1985, and assuming constant 1973 shares of the population, all categories of institutions would experience "slow but steady growth" (Carnegie Foundation 1975, p. 53).

However, the Foundation believes this prospect is unlikely because there has been constant change in the institutions' shares of the student population since 1963. The Foundation believes its second projection is more plausible because it is based on the shifts in shares that have occurred between 1963 and 1973, and on the assumption that these shifts would continue through 1985 at the same rate as they have in the recent past. The 10-year period from 1963 to 1973 was dominated by growth in enrollment at public community colleges and declines in enrollment at private two-year institutions. Also, as the demand for teachers diminished during this period, those institutions that focused on teacher education—the less highly selective liberal arts institutions, the universities, and the comprehensive colleges and universities—also lost enrollment (Carnegie Foundation 1975, p. 59). These trends indicate that by 1985 public community colleges will more than double in enrollment; comprehensive college and university enrollment will decline very slightly; all other categories will experience significant declines (Carnegie Foundation 1975, p. 58).

A more favorable outlook for four-year institutions results from the third projection, which is extrapolated from the change in enrollment shares that has occurred from 1968 to 1973. The Foundation suggests that this forecast offers a more likely assessment of future developments than its first two projections because the rate and kinds of changes that occurred in enrollment shares during the early and mid-1960's are not likely to recur. Furthermore, institutions that experienced enrollment losses to the public community colleges have apparently recouped some of their enrollment shares. Under this projection, universities, comprehensive colleges, and both kinds of liberal arts institutions would have larger shares of the population than anticipated under the 10-year base forecast. Public community colleges would experience only a slight increase and private two-year institutions would decline a little more than they would have based on the 10-year forecast (Carnegie Foundation 1975, pp. 59-60).

Changes in the Student Population

In chapter one, the potential for enrollment increases from some sectors of the population and declines among other sectors was dis-

cussed. However, for educational planners the predictions about mere numbers of students expected to enroll in the next two decades is not sufficient. They also need to know the characteristics of the total student population in terms of age, socioeconomic background, and academic ability. This section will examine these student population characteristics.

College officials are finding that student characteristics are changing among the traditional college-age group, i.e., 18-to-22-year-olds who enroll full-time in degree-credit programs. These changes are attributed to two trends: (1) the declining rate of attendance among students whose academic and socioeconomic background would have previously indicated nearly automatic college attendance; and (2) increasing enrollments from the student population whose lack of academic success and poor socioeconomic background would not suggest college enrollment as a viable alternative (Fenske and Scott 1973). Researchers have noted equalization of aspiration for a higher education among all socioeconomic groups during the period from 1959 through 1965:

> While college enrollment intentions between 1939 and 1959 increased equally for all income groups, in 1965 the children of poorer parents planned to attend college at twice the rate of 1959, while college attendance intentions of the children of the rich increased *only* 6% (Fenske and Scott 1973, p. 7, quoting Jaffe and Adams in Froomkin, J. *Aspirations Enrollments, and Resources,* 1970).

Researchers have focused on the characteristics that distinguish the new participants from traditional students and found numerous and fundamental differences between the two groups. K. Patricia Cross (1971) identifies the new students as "those scoring in the lowest third among national samples of young people on traditional tests of academic ability" (p. 13). They are further distinguished from more traditional students by their inability to learn well from traditional classroom teaching methods. Thus, through repeated negative experiences in school, they have become conditioned to, and expect to fail. Despite these handicaps, they are seeking postsecondary education because:

> Fundamentally, these New Students to higher education are swept into college by the rising educational aspirations of the citizenry. For the majority, the motivation for college does not arise from anticipation of interest in learning the things they will be learning in college but from the recognition that education is the way to a better job and a better life than that of their parents. (Cross 1971, p. 15).

The growth in this segment of the college student population may also be reflected in the decline in aptitude test scores that has been observed by both the College Entrance Examination Board and the American College Testing Program. In 1975, the CEEB reported a decline of 10 points on the verbal score and eight points on the mathematical score, the largest decrease for any single year since the decline began in 1963 (CEEB 1975). The CEEB has established a two-year Advisory Panel on Score Decline to determine the causes of the 12-year fall-off in scores. The study will be completed by the end of 1976.

Thus far, four possible factors in the decline have been identified: (1) the psychometric qualities of the test; (2) the test-taking population; (3) factors related to secondary education; and (4) changes in social conditions over the past 10 years. Research indicates that the first of these is not in any way a cause of the decline. While the findings on the other factors have not yet been reported, there is some evidence that the decline in the average SAT score is due not only to an increase in the number of educationally disadvantaged students taking the tests—the increase in the number of these students is relatively small in proportion to the total test-taking population—but there also has been a decline in scores over 600. Consequently, fewer high scores are also a factor in the declining averages (Marland 1976).

A report already issued by the American College Testing Program suggests that test scores have declined because of changes in the student population. Munday (1976) reports that ACT's composite average scores have declined over a 10-year period (1964-1965 to 1974-1975) by 2 percent of a standard deviation per year. He finds that the decline is not due to a decrease in the number of high-scoring students, but rather to a 6 percent increase between 1970 and 1974 in the number of students scoring in the low, 1-to-15 standard score interval. He finds this decline attributable to a larger pool of low-ability women planning to attend college. This pool of women may have increased significantly in recent years because of altered social perceptions that now encourge them to attend college; in the past it was appropriate, despite poor test performance, for low-ability men but not low-ability women to attend college.

These new students from the traditional college-age population are joined by adult and part-time students who also do not fit the profile of the customary college-age student. They share motivations for college attendance and interests that distinguish them as a group. For instance, the Committee on the Financing of Higher Education

for Adult Students (1974) finds that full-time students share with part-time students only the first of four motivational categories for college attendance: individual motivation, including personal or family goals and objectives. The adults and part-time students may also be motivated by professional and occupational objectives, including certification requirements and upward job mobility; organizational motivations, such as employer-sponsored educational programs; and "categorical, public-solving motivations," which refers to publicly- or privately-funded educational programs designed to deal with social problems (pp. 27-29).

One study of adult learners' interests is not in complete agreement with these motivational categories. Carp (1974) * found, in a survey of the interest of "Learners" and "Would-Be Learners," that the latter group expressed the greatest interest in vocational subjects, with 48 percent of that group giving this area as their first choice; in second place, general education, hobbies and recreation each received 13 percent of the Would-Be Learners vote. In the area of basic education, Would-Be Learners expressed greatest interest (9 percent) in business skills, followed by technical skills, (5 percent), and 4 percent each in vocational skills, industrial trades, nursing, child development, sewing and cooking, and investment (p. 21). In contrast, the largest group of Learners (42 percent) favored hobbies and recreation, while vocational subjects ranked second (35 percent), and general education, which included college and graduate level courses, ranked third at 25 percent (p. 24). The authors explain the differences between these two groups:

> [The findings] indicate the greater interest in hobbies and recreation and personal development among those with formal education—both in a sense being luxuries that can be afforded by the better educated and more affluent. In contrast, the relatively high interest in general education among Would-Be Learners with eight years or less of education is due to their need for basic literacy education (p. 23).

Summary and Analysis

Researchers who develop enrollment projections enter a hazardous trade. They must build into their forecasts a set of social, political,

* The sample was drawn from the population of 104 million people between the ages of 18 and 60 who were not full-time students in 1972. The survey's findings are divided into two major overlapping categories, "Learners" and "Would-Be Learners," of 1,207 and 3,001 individuals, respectively. The "Learners" were identified as those respondents who reported receiving some instruction in the previous 12 months. "Would-Be Learners expressed an interest in further learning. "Would-Be Learners" also include 1,142 "Learners" interested in further instruction.

and economic factors that are subject to unpredictable changes. Given this degree of uncertainty, perhaps the importance of the enrollment projections currently available lies not so much in their statistical analysis as in their consideration of the social, political, and economic factors upon which these statistics depend. In other words, the projection analyses serves to focus the higher education community's attention on those factors with which they need to reckon in terms of their institutions' growth and development.

For colleges and universities, their own conceptions of the purposes they currently serve and the purposes they might serve may affect the importance of the variables in the enrollment forecasts, and therefore affect their individual enrollment projections. For instance, institutions that subscribe to the view that the level of employment opportunities for college-educated people in the job market is of prime importance in the decision to attend college could adjust their program planning and their enrollment expectation based on analyses that favor this approach. In contrast, those colleges and universities that share a broader view of the purposes of higher education could seek out methods for enhancing their enrollment capabilities under this broader perspective. In either case, careful attention needs to be paid to analyses of what segments of the population will enroll in higher education and what their needs will be.

It is certain these adjustments for the future cannot be carried out in a vacuum. Administrators are and have been responding to shifts in enrollment trends for some time. Their present adjustments to enrollment trends will be part of any future planning for enrollment growth.

Current Adjustments to Downward Enrollment Trends

The future character of higher education is partially visible now in institutional efforts to respond to enrollment slowdowns and declines, as well as the threat of these developments. This chapter will examine institutions' responses in four areas: student recruitment; program development; administration; and planning.

Student Recruitment

In looking at the problem of decreasing enrollment, observers have raised the obvious issue of whether institutions have lowered their admissions standards to increase enrollments. Glenny (1976) asked college presidents whether they had modified their admissions standards to increase enrollments on the undergraduate, graduate, and professional levels between 1968 and 1974, and whether they anticipated modification of their standards between 1974 and 1980. The survey report indicates that such modification has occurred among all types of institutions in the public and private sectors, but that generally the percentage of undergraduate institutions experiencing modifications will not increase between 1974 and 1980. These total figures mask some interesting responses among institutional types. In the public sector, 42 percent of the liberal arts college presidents reported modifications between 1968 and 1974, but only 32 percent of the respondents anticipated modification in the future. On the other hand, public and private graduate schools apparently foresee more difficulties in the 1974 to 1980 period. The percentage of public institutions that anticipate modification in the 1974 to 1980 period is 11 percent higher than in the 1968 to 1974 period (from 30 to 41 percent) (Glenny 1976, p. 191).

It is difficult to evaluate these responses in terms of the actual changes in the student population. A smaller study by Miller (1976) offers some anecdotal information that indicates administrative and faculty perceptions of the changes that have occurred. Miller surveyed seven Pennsylvania institutions of differing sizes, types, and control to learn how they were responding to enrollment problems. In the area of admissions, only one of the institutions, a selective, private liberal arts college, had not faced enrollment problems during the fall of 1974. However, administrators at other institutions were disturbed

by the fact that their applicant pool was smaller. This situation resulted in a need to admit a larger percentage of that pool to put together a good-size freshman class. Consequently, these institutions are admitting a larger percentage of students from the lower end of their applicant pool.

Among private institutions there is additional concern in the admissions process—the students' ability to pay for their education. For example, a description of how Columbia University's College admission committee works shows that their discussions are studded with comments concerning the ability of an applicant's family to pay for his education and to contribute support to the institution (Drucker 1976). Columbia's concern is probably not atypical. At Brown University more than half of the student body paid the full tuition of $6,460 for the 1975-1976 academic year, and it is estimated that the average annual family income for these students is about $50,000. For students receiving some aid, the estimated average annual income is still high—more than $30,000 (Todd 1976 p. 60).

The burdensome costs at some higher education institutions and the wealthy student body that has resulted worries administrators. Harvard, in an effort to assist lesser-income families to pay educational costs (about $7,000 in 1976-1977), has developed a new loan program for middle-class families in the $15,000 to $50,000 income bracket. Harvard decided to undertake the program after it recognized that families in the $15,000 to $30,000 income range are reluctant to send their children to high-cost schools. Last year the percentage of students from families in this range who were accepted but did not enroll increased by nearly 10 percent. There is also some fear that high costs may deter students from ever applying. The new loan program would allow parents to borrow a minimum of $2,000 per year up to a maximum that cannot exceed the unpaid balance on the student's term bills. Loans will be offered at 8 percent for a term, a year, or for all four years. The sum borrowed will determine the size of the monthly repayments as well as the length of time allowed to repay the loans. Loan payments will range from $125 per month over 71 months to $350 per month over a 78-month period ("Harvard to Aid . . ." 1976).

Other colleges and universities are also acting on their concern over the applicant pool from which they select their students. Glenny (1976) reports that recruitment efforts have increased significantly between 1968 and 1974 for almost two-thirds of his survey respondents.

> Those institutions reporting extensive recruiting of traditional students and early admissions from high school between 1968 and 1974 are more

> likely than others to have experienced a decrease in enrollment and/or an increase in expenditures per student during the same period. . . . The same relationship holds among private institutions in their recruitment of adults and for public institutions in the case of transfer students. *Thus, there is some evidence that colleges step up recruiting efforts when their enrollments decline* (emphasis added (p. 45)).

To increase enrollments, over one-third of Glenny's respondents report they anticipate a growth of more than 5 percent in professional admissions and recruitment staff between 1974 and 1980; three-fifths of the institutions had already increased their recruiting staff between 1968 and 1974.

Some recruitment efforts have become highly refined, in that college officials are undertaking to increase their enrollments by using marketing concepts developed in business. One advocate of "marketing" in higher education explains its purpose as "uncovering specific needs, satisfying these needs by the development of appropriate goods and services, letting people know of their availability, and offering them at appropriate prices, at the right time and place (Krachenberg 1972, p. 380). He suggests that these activities are appropriate for colleges and would be effective in increasing enrollments.

Trivett (1974) reports that several institutions experienced success when they used marketing ideas to restore the vitality and growth of their colleges. One liberal arts college increased enrollments by seeking a new student clientele after undertaking a self-study to discover its strengths and weaknesses. In seeking its new markets the institution decided "(1) that the community could be served, (2) underutilized personnel employed, (3) college-level education needs filled, and (4) these needs and resources brought together by the college functioning as broker" (Trivett 1974, p. 3). These efforts resulted in the initiation of degree programs for women with some college experience, for young working people who want career-oriented college work, and for skilled workers (Trivett 1974).

Leslie and Miller (1974) also regard marketing as a significant activity that colleges must undertake to remain dynamic. Their list of potential new sources of enrollment includes some segments of the population described earlier, such as adults and "new" students. In addition, they suggest that institutions explore the possibilities of educating students from such markets as Vista and trade-union apprenticeship programs, persons who need job retraining and updating, and precollege students who are academically ready to begin college-level work.

The adult population may constitute a particularly attractive stu-

Table 2. Percentage of institutions reporting extensive change in emphasis on active recruitment of students by type of student, actual 1968-1974 and anticipated 1974-1980.

Type of student	1968-1974	1974-1980	Percentage point change
Traditional students	65	70	5
Ethnic minorities	51	52	1
Evening students	41	67	26
Low-income students	39	45	6
Adults over 22	38	66	28
Transfer students	38	56	18
Off-campus students	35	58	23
Early admissions from high school	14	34	20
Previous dropouts	14	31	17

Note: Numbers upon which percentages are based range from 945 to 1,175.

dent pool for many institutions because their participation in education has grown so significantly in recent years. The National Center for Education Statistics (Oakes 1976) indicates that participation in adult education increased three times as much as the eligible population—*defined as excluding regular full-time students, ages 17 to 34*—between 1969 and 1972. However, there are some difficulties in such a plan. Since it is estimated that the average part-time student takes between one-third and two-fifths of a full-time course load, it takes a number of part-time students to equal one full-time student. One formula for converting part-time student enrollment to full-time equivalency uses a one-to-nine ratio (Committee on Financing . . . p. 40-41). This large imbalance may present problems for state institutions that enroll part-time students. If these institutions receive their state funds on the basis of full-time equivalency enrollments, they will need large numbers of part-time students to get these funds; also, the overhead costs of enrolling these students may offset any increase in state monies.

However, the most recent statistics from the Bureau of the Census (1976b) indicate a startling reversal in enrollment trends between 1974 and 1976. The Census Bureau reports that there was a 10 percent increase in the number of persons enrolled in college during this period. Most significantly: "The gain in college enrollment from 1974 to 1975

was due to a very large increase among full-time students, reversing the trends toward a greater proportion of part-time students observed between 1970 and 1974" (p. 2). It is too early to determine whether this development is transitory or the beginning of an unforseen enrollment trend.

These suggestions have apparently been accepted by many colleges and universities. Table 2 above illustrates the growth in recruitment of nontraditional students (Glenny 1976, p. 45, Table 14).

Program Adaptation

Three developments—new student interests and needs, new student markets, and institutional concern over attracting and retaining both traditional and nontraditional students—have resulted in program adaption and changes at many higher education institutions.

The student thrust for career preparation affects enrollment in various types of institutions as well as in departments within institutions. Glenny (1976) found the largest growth in vocational programs occurred among public institutions: 71 percent of public research universities and 81 percent of other public institutions granting doctorates reported increased enrollments in more than half of their vocational programs. In these categories, private institutions experienced similar growth (16 and 40 percent, respectively). Private liberal arts colleges (44 percent), are also experiencing significant growth in vocational programs; the degree of increase is not surprising because these colleges started from a comparatively small base of vocational programs (p. 26).

On a departmental basis, Miller (1976) found that departmental initiatives to attract students often follow enrollment stabilization or declines. These initiatives take the form of developing new products and new markets and of reorganizing departments to add vocational appeal to traditional programs. For example, one sociology department dealt with declining enrollments by developing a B.A. degree in social work that is expected to attract students interested in entering the "expanding services" area of the economy. The department chairman admits that this program is not significantly different from their current sociology program, but suggests that it might help students in their first job-seeking efforts. Another approach involves attracting students interested in vocational programs through a change in the name of the degree granted. Miller cites the example of a university political science department that now offers a B.S. degree in public service, which is designed to attract students who have been selecting B.S. degrees in business, human development, and education

because the political science B.A. degree has language requirements these students do not want to fulfill. Another instance of imaginative program development occurred in a French department whose efforts to boost enrollments resulted in a B.S. degree in French and Business for students interested in international commerce.

The adaptations described above are still within a traditional framework, largely directed toward college-age students enrolled full-time who learn in a traditional classroom setting. In contrast, literature on the potential for growth in enrollment among new* and adult students emphasizes the need for nontraditional or innovative approaches to learning if colleges are to attract and hold these students.

K. Patricia Cross (1971) is particularly outspoken about the need for institutions to recognize the distinct abilities and problems of new students in higher education and to create programs that can effectively serve these students. Emphasizing society's need to value and reward many kinds of learning experiences and skills, her proposals for educational adaptation and reform call for a number of modifications. First, there must be a recognition by society that work can be divided into several areas of excellence. The goal of education should be to foster the student's development in the area for which he shows the most ability and to develop his competence in other areas. Second, educators should develop new techniques for evaluation, such as performance tests, special projects, or oral interviews; the judges of a student's performance should include a range of people, for example, a work-study supervisor, persons familiar with a particular community project, or teachers. For new students, these performance measures, unlike past normative testing and grading, would produce neither automatic failure nor unearned and unmeasured academic success. Third, Cross recommends that a variety of instructional methods be developed that are tailored for the kind of learning that is being transmitted. For example, she notes that lectures and written examinations may be most appropriate for educating students to work with ideas, but that experiences such as group work, technical work, and experience in community work and industry may be more effective in preparing people to work in service-oriented and technical professions (Cross 1971, p. 167).

Adults who return to higher education may also require programs tailored to meet their specific needs. For example, faculty accustomed to teaching students under 22 years of age may have to adjust their

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* See chapter 2, "Changes in the Student Population."

teaching methods for a more mature and experienced audience. There is some agreement that adults need instructional methods that will take advantage of their maturity, i.e., their experience in accepting responsibility for their lives. However, Carp (1974) found that both "Would-Be Learners" and "Learners" preferred the traditional lecture approach over more innovative methods, such as instructional television. Carp suggests that adult learners are reluctant to use new teaching systems because they do not offer sufficient interaction and peer support. He believes that convenient and inexpensive teaching methods that provide such interaction will attract adult learners.

Two other frequently mentioned problems in adult learning are financing and time. "Would-Be Learners" report that cost (53 percent) and time (46 percent) represent the chief barriers to their participation in further education (Carp 1974, p. 48). Cost is a particularly important consideration for those under 35, and the belief that there is not enough time for education (including travel time) increases with age.

Some colleges have begun programs designed to ease a few of these adult learning barriers. For example, the Weekend College program at the C.W. Post Center of Long Island University, begun in 1971, offers programs such as a B.S. in Nursing, a Master of Professional Studies in Health Care Administration, a Master of Professional Studies in Criminal Justice, an A.A. in Humanistic Studies, and an A.A. in General Studies. The programs are usually traditional in method and content and are implemented only after extensive market research has shown a need for and interest in their development. The Weekend College's success in attracting students is primarily due to its breaking down of time barriers. Since the courses run for six consecutive six-hour sessions on a Saturday or Sunday, or two full weekends separated by five weeks of independent study, the weekend format makes the college accessible to working people, housewives without babysitting resources, and persons for whom daily commuting trips during the week would be difficult. The college's developers also find that the intensive nature of long classroom sessions provide adults with psychological support through group interaction.

The Weekend College provides flexibility for adult students by granting specified amounts of credit for prior off-campus learning. In addition, it supplies the counseling and support that adult students may need through preprogram, noncredit, speed-reading and study-skills courses (Shulman 1975).

Impact on College Administration

Enrollment fluctuations present administrators with complex problems, especially in the areas of short- and long-term budget and developmental planning. These problems have surfaced most noticeably in state systems where such planning is frequently linked to current and projected enrollment figures.

In a study of nine multicampus systems, Lee and Bowen (1975) examine the importance of enrollment figures in the budgetary process,* pointing out that formulas that were successful in periods of growth may work to the disadvantage of institutions during periods of enrollment decline. Some states (e.g., California and North Carolina) use a student-faculty ratio to determine fund allocation, so that "the dollars represented by the ratio should reflect the actual number of students during the budget period" (p. 60). Two problems can result from this formula. First, while an overall enrollment projection may turn out to be completely accurate, individual institutions may exceed or fail to meet their projections. In this situation, the central budget office is faced with urgent requests for additional funds from the overenrolled campuses, while the shortfall campuses contend that their enrollments will increase during the spring. Second, some state system administrations follow the practice of "unallocating" funds if actual enrollment figures are two percent or more less than the projected figure. Using the student/faculty ratio formula, this procedure results in a significant loss of funds:

> . . . funds which are "unallocated" or "saved" because of enrollment declines are less than the average cost per student used for enrollment increases. In general, budgetary formulas provide support for each additional student in excess of the actual marginal cost. While enrollments are growing, the difference is a source of fiscal flexibility. ***But when enrollments decline, use of the same formulas will accentuate or accelerate the impact of decline because the increment of formula support withdrawn is greater than the marginal savings*** (emphasis added) (Lee and Bowen 1975, pp. 60-61).

Another formula approach described by Lee and Bowen allows institutions time for necessary adjustment to enrollment changes. For example, the University of Texas receives funds based on actual enrollment during the year before the biennial budget process. Each campus receives its funds directly from the state. Flexibility is provided by procedures that allow a campus a two-year period to adjust to losses of enrollment through several state formulas used for fund

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* For technical discussions of enrollment formulas see Meisinger (1976) and Martin and Wing (1975).

acquisition. In addition, a college may seek more time to adapt its resources to fewer students.

Lack of flexibility in a budgetary formula can lead to severe constraints. The University of Wisconsin system discovered this problem during 1973-1974, when opening fall enrollment was more than 20,000 students short of a 1969 projection. Because of the "inflexible statutory funding formula" (Lee and Bowen 1975, p. 14) the budget base for the system was reduced by 7.5 percent. These factors combined to create severe problems in the system—over 500 nontenured faculty contracts were not renewed and 88 tenured faculty and staff were notified of layoffs.

In response to this situation, the Wisconsin Regents instituted a new policy to cope with enrollment declines and developed a new budget formula. Their response offers an instructive example of how policy considerations are influenced by changing patterns of enrollments. The Regents' policy is directed toward maintaining the reduced budget and achieving enrollments that are appropriate for this budget. Recognizing that this forces a choice between maintaining quality of educational programs and access to the system, the Regents' policy seeks to achieve the former. Among the Regents' new policies are these three:

> 1. The U. W. System and its Institutions should provide access to instructional programs only to those numbers of students for whom *instruction of quality,* as judged by the individual campuses, can be maintained.
>
> 2. The Institutions and the System should complete for 1976-77 the refinement of those targeted capacity goals which represent the *best fit* between their available budget resources and the number and distribution of students that can be reputably served.
>
> 3. The 1976-77 annual budget resources should represent a stabilized level for each Institution *appropriate to its target capacity* for instructional programming; any Institution whose relative support capacity, as gauged by the Composite Support Index method, currently deviates from a properly-stabilized level will be moved to that level on a transitional basis (University of Wisconsin System 1970, p. 2).

The policy statement also points up another problem that can develop within a state system beset by enrollment declines—competition for students. The Regents advise "in a period of resource scarcity and in the presence of possible changes in demands for services in the next decade, the search for advantage among Institutions vis-à-vis the current marketplace of students must be firmly avoided. . ." (p. 3).

This cautionary statement is not [illegible] to the Wisconsin system. Statewide administrators now recognize that campuses within a system

may vie with one another for students to get the largest possible share of the budget. The competition may take the form of lowering freshman admissions standards, particularly since most systems do not have uniform policies on admissions. For example, senior colleges who lower their standards to attract students who otherwise would go to nearby community colleges could cause the community colleges to suffer a loss of funds because their budget is tied to enrollment. This also results in students being admitted to institutions that are not equipped to meet their needs (Lee and Bowen 1975).

To handle the problem, some systems are developing central administration procedures to assist students in making second choices if their first-choice school is overenrolled, or to direct students to underenrolled institutions. The Wisconsin system has instituted the Higher Education Location Program, a free telephone clearinghouse to answer questions about the university system. This program provides callers with information about specific schools and has the schools contact the caller.

In other systems, students denied admission at their first choice school may be redirected to another campus. Of course there is no certainty that such students will enroll in the underutilized institutions. Also, these redirection efforts may backfire. Lee and Bowen observe:

> The best students are the least likely to accept redirection; refused entrance to their preferred campus, they may well enroll outside the university. Paradoxically, however, the same result occurs with some of the poorest students, whose motivation for higher education is often weak to start with; denied admission to their preferred campus, they often drop out entirely (p. 125).

In a related issue, state systems have recently experienced an unexpected increase in admission applications while they were considering or had already decided to limit their enrollments. However, budgetary constraints and long-range forecasts of enrollment decline discouraged state administrators or campus officials from expanding their institutions for what they saw as only a temporary increase (Magarrell (1975b).

There also appears to be a trend toward setting enrollment limits. For example, New York State has determined to hold enrollments at 20 campuses at 1975 levels for the next five years. Other institutions are attempting to reduce their levels by the fall of 1976—Michigan State University hopes to lower enrollment by 1,000 students in Fall 1976; campuses in the University of North Carolina system may face

enrollment limitations; and the Florida state university system is considering enrollment limits (Magarrell 1975b).

The state systems' concern with competitive efforts to enroll students and setting enrollment limits may indicate an acceleration of statewide centralization. Lee and Bowen predict:

> . . . systemwide monitoring and approval of campus undergraduate admissions requirements will become an essential of system governance where it does not already exist. Unregulated enrollment competition should not become a substitute for the hard decisions of program and resource allocation which must be made (p. 145).

Planning

Enrollment fluctuations affect the entire higher education community, but some institutions are better prepared for the fluctuations because they planned for controlled enrollment growth during the boom years of the 1960's. The University of California's Berkeley campus set an enrollment limit of 27,500 students in 1957; in 1965 Gettysburg College took the same action with an enrollment limit of 1,800. Both institutions gained from this action because it required them to analyze their strengths and base their plans upon them. When goals were achieved, facilities needed little expansion and funds were available to maintain size (Carnegie Foundation 1975, p. 21). Also, since both institutions were growing at a very gradual rate during a period of great expansion, they were able to achieve considerable flexibility in the selection of their student body, faculty, and program development.

There is now a renewed emphasis on planning for a period of no growth, with the focus being on maintaining quality, vitality, and flexibility. The Carnegie Foundation, accordingly, has developed recommendations for planning institutional survival and deveolpment in light of the new, downward enrollment projections. In its initial recommendation, the Foundation advises that:

> . . . institutional leaders prepare analyses of their institutions to determine, as accurately as possible, the present situation and the factors shaping the future course. These analyses should be used to inform their colleagues and constituents, and should be part of a larger effort designed to create attitudes receptive to and conditions conducive to change (Carnegie Foundation 1975, p. 87).

The Foundation points to the need for reallocation practices within the institution to achieve flexibility in a period of budgetary constraints. However, reallocation is difficult in higher education institutions because they are decentralized by nature. Institutions will

need to work through the burdensome process of peer view and recognize that decisions on what programs will be reduced or cut will be difficult to make (Carnegie Foundation 1976, p. 88). The Foundation further suggests that institutions introduce two new practices to gain flexibility. First, it advises that institutions create a self-renewal fund for new or expanded programs by annually withdrawing funds of about one to three percent from current campus programs. Second, it recommends that efficiency and cost-savings can be encouraged if divisions of an institution are allowed to "keep" a share of savings that result from innovation or investment in more efficient equipment (pp. 91-92). Norris (1976) observes the difficulties inherent in efforts to develop definitive long-range plans in light of the uncertainties involved in enrollment projections. He suggests that institutions closely monitor the major demographic, economic, and public-policy considerations that influence enrollment, make use of available modeling and analytical studies,* and maintain institutional options, taking decisive action when the institution's monitoring processes indicate they are appropriate.

Summary and Analysis

Colleges and universities do not yet know the long-range effects of their accommodations to enrollment fluctuation. It seems obvious, however, that the "normative" characteristics of students attending higher education institutions in the 1960's—bright, 18-to-22-year-old students from several socioeconomic groups who follow traditional, four-year, liberal arts programs—will be altered substantially for many higher education institutions.

Some changes are now evident in students, academic programs, administration, and institutional planning. The most fundamental changes will probably be in the character of the student population and in the emphasis on vocational preparation in programs. These developments will result from the willingness of institutions to alter their admissions criteria and their academic programs to compete successfully for students and to boost their enrollments.

At the present time, the process of adaptation and the evaluation of changes cannot be tied to a formula. Individual institutional

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* Norris recommends studies by the Carnegie Council (1975), Dresch (1975), and Freeman and Hollomon "The Declining Value of College Going," which appeared in the September 1975 edition of *Change* magazine. The Lilly Endowment is also sponsoring a study that will develop methodologies for assessing the impact of enrollment fluctuations on colleges and universities, and for planning for these fluctuations. The expected completion date is June 1977 (Carroll 1976).

efforts to promote innovative and sound educational opportunities may benefit the entire higher education enterprise. As such activities become better known to the public and foster greater participation from all segments of the population, higher education may win increased public support for its undertakings. On the other hand, there may well be misgivings about some of the steps institutions have taken to survive, e.g., colleges' accepting students for whom they do not have the appropriate educational programs, and program offerings that border on hucksterism. A more comprehensive evaluation can only take place at some future date.

Conclusion

By all accounts, colleges and universities can no longer expect to achieve long-range growth by enrolling greater numbers of traditional college-age students in liberal arts programs. A long-term decline in the birthrate and an evident stabilizaton in the rate of college attendance among 18-to-22-year-olds are the major factors contributing to this unique situation in higher education.

These developments appear to be the only area of general agreement among enrollment forecasters. Their predictions on future growth and development are colored by their perceptions of the character of American higher education and of the role it should play in our society. Therefore, projections run the gamut from dismal to highly optimistic. Analysts who offer low-growth predictions contend that economic incentives are the prime reason for college attendance and that the lack of promising upward career mobility will discourage college enrollment. However, they appear not to have taken full account of a new phenomenon in college attendance—the student who enrolls in college so he may compete more effectively in a tight job-market situation.

In contrast to these low estimates, some observers foresee great potential for youth in higher education if the public and colleges and universities recognize that higher learning is an open-ended idea rather than a limited one, and can serve many purposes. Leslie and Miller's concept of the "higher education function" perhaps best expresses this viewpoint, suggesting as it does that higher education is more a question of an approach to sophisticated learning experiences than an issue of organization and structures. This view may be gaining greater acceptance as new forms of higher education, such as external degree programs, become more firmly established. However, a wholesale implementation of this concept might require many educators to forsake the structures and processes of learning with which they are familiar, therefore it is probably unrealistic to expect extensive changes in the near future.

It is evident that there is sufficient variety in American higher education to accommodate many motivations for enrollment. Institutions concerned about insuring survival and growth can take steps to adjust their situation to new realities by developing purposes

and programs to meet the needs of students they recruit and enroll. Most important for long-range growth are institutional efforts to monitor the key factors in enrollment trends—birthrates, rates of participation among different segments of the population, and shifts in student higher education goals.

College officials who become sophisticated in understanding these factors will have developed a most useful tool in planning their institution's future. The true merit of current enrollment analyses and projections may lie, therefore, in serving as useful paradigms for higher education planners as they analyze the confusing and sometimes contradictory developments in enrollment patterns.

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